

**METHOD AND APPARATUS FOR TESTING A SOFTWARE  
COMPONENT USING AN ABSTRACTION MATRIX**

**Abstract of the Disclosure**

A functional testing technique is provided employing an abstraction matrix that describes a complex software component to be tested. The abstraction matrix includes state and event information. The technique is an automated process which parses the abstraction matrix to generate test cases and mapped expected results therefore. The test cases are separated based on layers of the software component and data structures are associated with the separated test cases of the layers. The data structures allow the test cases of the various layers to be uncorrelated. The software component executable is employed to generate test case execution threads from the test cases and mapped expected results for a particular layer. These execution threads can then be executed in parallel, thereby testing the software component.